

BEFORE THE

**Federal Communications Commission**

WASHINGTON, D.C. 20554

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 FEDERAL COMMUNICATIONS COMMISSION  
 OFFICE OF THE SECRETARY

In the Matter of )  
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 Amendment of the Commission's Rules )  
 With Regard to the 3650-3700 MHz )  
 Government Transfer Band )

ET Dkt. No. 98-237  
 RM-9411

To: The Commission

**REPLY COMMENTS OF LOCKHEED MARTIN CORPORATION**

Lockheed Martin Corporation ("Lockheed Martin") hereby replies to the comments filed concerning the Notice of Proposed Rule Making ("NPRM") in the above-captioned docket.<sup>1/</sup> Lockheed Martin joined TRW Inc. ("TRW") in initial comments, and expressed concern that the *NPRM* fails to take into account the existing rulemaking request by a coalition of Ka-band fixed-satellite service ("FSS") licensees for use of the same 3650-3700 MHz band for tracking, telemetry and control ("TT&C") gateway links for satellite systems in bands above 15 GHz. While use of the 3650 - 3700 MHz band for the fixed service, including fixed wireless access ("FWA"), is not necessarily incompatible with use of this band for satellite TT&C links, the Commission's proposal freezes applications for new satellite earth station facilities in this band and contemplates precluding any additional FSS use in the future, even though a substantial number of FSS system licensees and applicants for systems above the Ku-band have

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<sup>1/</sup> See *Amendment of the Commission's Rules with Regard to the 3650-3700 MHz Government Transfer Band*, ET Dkt. No. 98-237, FCC 98-337, slip op. (released December 18, 1998).

already made plans for such use, and the FCC has forwarded new registrations to the ITU specifying TT&C operations in the extended C-band.

Understandably, there is significant support among commenters representing fixed service interests for a spectrum allocation suitable for fixed service use, including FWA. However, these commenters offer support more for the concept of the allocation than for the specific proposal that the Commission has offered. There is little discussion by most fixed service commenters concerning sharing this spectrum with other services, and many devote their comments to discussing what they believe are appropriate licensing procedures.<sup>2/</sup> Moreover, several commenters suggest that more spectrum is necessary to accommodate fixed service needs,<sup>3/</sup> while others contend that *alternative* spectrum would be more useful and appropriate than that suggested in the *NPRM*.<sup>4/</sup> In fact, at least one fixed service commenter opposed the allocation of the 3650 - 3700 MHz band, believing that allocation of such a small spectrum block, which would be incapable of permitting a 100 MHz separation between transmit and receive

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<sup>2/</sup> See, e.g., Comments of Blooston, Mordkofsky, Jackson & Dickens at 5-8; Comments of Petroleum Communications, Inc. at 2-3; Comments of Rural Telecommunications Group at 5-11; Comments of Telephone and Data Systems, Inc. at 2-4.

<sup>3/</sup> See Comments of Cheyenne River Sioux Telephone Authority at 4-5; Comments of SR Telecom, Inc. at 6-7

<sup>4/</sup> See Comments of Lucent Technologies at 5; Comments of SBC Communications, Inc. at 2. Both of these commenters suggest that it might be more appropriate for the Commission to look to the 3400 - 3600 MHz band for FWA use.

channels, “would discourage rather than encourage the near term introduction of wireless technologies to meet the current and future data bandwidth challenges.”<sup>5/</sup>

Commenters representing a broad spectrum of satellite operators and users, on the other hand, are virtually unanimous in their alarm that the Commission might adopt a fixed service allocation that would preclude future FSS use of the 3650-3700 MHz band.<sup>6/</sup> These commenters simply seek consideration of their legitimate spectrum needs, which have already been recognized by the Commission through the forwarding of ITU advanced publication and coordination materials specifying extended C-band frequencies for TT&C use. Several specifically mention that there are legitimate prospects for sharing among fixed service and FSS users of these bands.<sup>7/</sup>

Even some fixed service commenters observe that FWA is not inherently incompatible with FSS use, and it is appropriate to explore sharing opportunities between these services, as well as alternative allocation schemes. For example, Northern Telecom, Inc. (“Nortel”), one of the leading proponents of FWA technology, points out that “[s]tudies are well-

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<sup>5/</sup> Comments of Airspan Communications Corporation at 1.

<sup>6/</sup> See Comments of Comsat Corporation (“Comsat”); Comments of EchoStar Communications Corporation; Comments of GE American Communications, Inc.; Comments of Globecast North America Incorporated; Comments of Hughes Communications, Inc.; Comments of Loral Space & Communications, Ltd. (“Loral”); Comments of New Skies Satellites, N.V.; Comments of PanAmSat Corporation; Comments of the Satellite Industry Association (“SIA”); Comments of Sprint Corporation.

<sup>7/</sup> See, e.g., Comsat Comments at 12-15; Loral Comments at 7-8.

advanced in ITU-R WP 4-9S to determine the criteria for sharing in these frequencies between the fixed service, including FWA applications, and the fixed satellite service.”<sup>8/</sup>

As Lockheed Martin and TRW noted in their initial comments, the nature of TT&C downlinks is such that only a relatively small number of rather widely dispersed earth station facilities will be necessary to implement the use proposed by the licensed FSS systems and system applicants.<sup>9/</sup> It may therefore be possible for the Commission to derive limits or coordination approaches for the 3650-3700 MHz band that would apply to terrestrial and/or satellite users and enable certain types of wireless and satellite applications to co-exist.

Accordingly, the Commission should undertake in this proceeding not only to designate suitable spectrum for assignment to the fixed service, but also to provide sufficient spectrum to accommodate FSS TT&C in the 3600-3700 MHz band. As Lockheed Martin and TRW proposed in their initial comments, an appropriate means of achieving this end would be to consolidate RM-9411 with this *NPRM*. In any event, Lockheed Martin incorporates herein by reference the joint petition for rulemaking in RM-9411 as well as its comments in that proceeding. At the same time, the Commission should rescind its freeze on applications for new or substantially modified facilities in the 3650 - 3700 MHz band. The Commission must ensure that

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<sup>8/</sup> Nortel Comments at 6. Comsearch, an independent engineering firm that coordinates spectrum use among fixed service and FSS licensees at C-band, also observes that the Commission is incorrect to imply that FSS Earth station facilities require large exclusion zones in which no fixed service facility can co-exist. *See* Comsearch Comments at 2.

<sup>9/</sup> *See* Joint Comments of TRW and Lockheed Martin at 7.

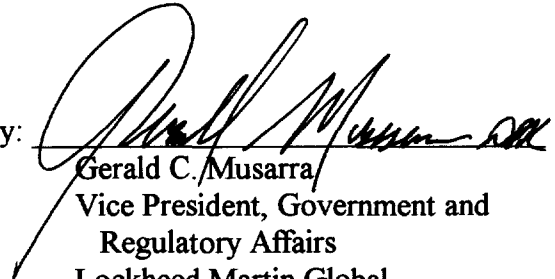
FSS TT&C, as well as FWA, is provided with spectrum that is adequate to promote successful development and operation of FSS systems.

Respectfully submitted,

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By:

A handwritten signature in black ink, appearing to read "Gerald C. Musarra", is written over a horizontal line.

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